

**ABSTRACT**

A sensor method and system are disclosed. A fluid flow sensor can  
5 be provided, which measures the thermal conductivity of a fluid. The sensor  
itself can be configured to comprise one or more sensing element associated  
with a sensor substrate. A heater can be associated with said sensor  
wherein said heater provides heat to said fluid. A film component can also  
be provided that isolates said fluid from said heater and said sensor,  
10 such that said film component conducts heat in a direction from said heater  
to said sensor, thereby forming a thermal coupling between said sensor, said  
heater and said fluid, which permits said sensor to determine a composition  
of said fluid by measuring thermal conductivity thereof without undesired  
losses of heat in other directions. The film component can be configured on  
15 or in the shape of a tubing or a flow channel.